

ANALYSIS INITIATIVES FOR QDR 2001

**BRIEFING TO MORS MINI-SYMPORIUM
2 February 2000**

**MS. ROBBIN BEALL
N81 JOINT WARFARE
ANALYSIS**

OUTLINE

- **BACKGROUND**
 - **QDR LESSONS LEARNED**
 - **OVERVIEW OF FORCE STRUCTURE ANALYSIS METHODOLOGY**
- **FORCE SUFFICIENCY IN OPERATIONS OTHER THAN WAR**
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- **SUMMARY**

PAST QDR LESSONS LEARNED

- DUAL MTW SCENARIO ALONE NOT ADEQUATE FOR SIZING NAVY FORCE STRUCTURE**
- NAVAL FORCE STRUCTURE ASSESSMENTS MUST INCLUDE A COMBINATION OF FORWARD PRESENCE, CRISIS RESPONSE, AND WARFIGHTING MISSIONS**
- OSD/J-8 DYNAMIC COMMITMENT WARGAMES DURING LAST QDR SUGGESTED AN APPROACH FOR INCREASING FOCUS ON PRESENCE AND CRISIS RESPONSE**

NAVAL FORCE STRUCTURE ANALYSIS REQUIREMENTS

GLOBAL NAVAL FORCE ALLOCATION

- 5-10 YR PERIOD
- FORWARD PRESENCE
- CRISIS RESPONSE
- MTW/SSC



SUFFICIENCY OF FORCES ASSIGNED

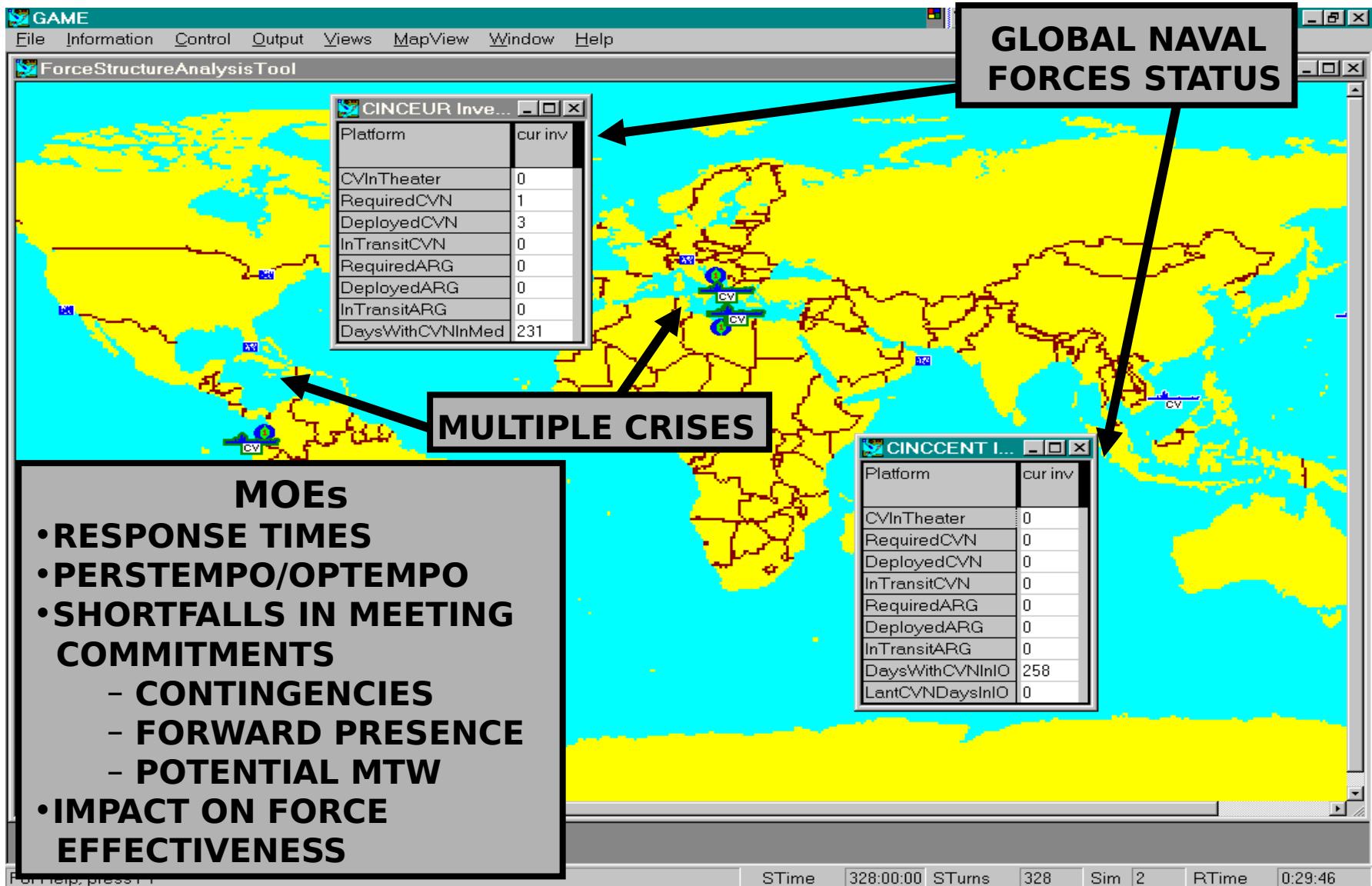
- GNFPP REQUIREMENTS
- MOOTW/SSC/MTW EFFECTIVENESS

STRESS ON NAVAL FORCE STRUCTURE

- PERSTEMPO
- OPTEMPO
- SHORTFALLS IN MEETING COMMITMENTS
 - DELAYED ARRIVALS
 - INADEQUATE NUMBERS
- IMPACT OF SHORTFALLS ON FORCE EFFECTIVENESS



FORCE STRUCTURE ANALYSIS TOOL (FORSAT)



FORSAT

- **FORCE STRUCTURE ANALYSIS TOOL (FORSAT) UNDER DEVELOPMENT IN RESPONSE TO QDR LESSONS LEARNED**
- **PROJECTS PRESENCE COMMITMENTS, UNIT AVAILABILITY, AND READINESS INTO FUTURE TIMEFRAME.**
- **IMPLEMENTS FORCE ASSIGNMENT RULE SET AS ANALYST-CONFIGURED EXPERT SYSTEM.**
- **RANDOMIZES TIMING OF CONTINGENCIES OVER MULTIPLE ITERATIONS .**
- **PROVIDES HIGH-LEVEL MEASURES OF STRESS ON NAVAL FORCE STRUCTURE.**
- **ASSUMPTIONS REVIEWED BY FLT AND OPNAV .**
- **VERIFICATION AND VALIDATION PROCESS STARTED.**

CONTINGENCY SET

- **SIXTEEN CONTINGENCIES OVER 5 YEARS**
 - MTW-W
 - SSC(SLOC)
 - HUMANITARIAN ASSISTANCE: TUNISIA, PHILLIPINES (2), JAPAN, CUBA
 - PEACEKEEPING OPERATIONS: BURMA-THAILAND, BALKANS
 - INTERVENTIONS: LIBYA, COLUMBIA, ETHIOPIA-ERITREA, TOBAGO
 - NONCOMBATANT EVACUATIONS: NIGERIA, ETHIOPIA-ERITREA, BURMA-THAILAND
- **INITIAL FORCE REQUIREMENTS FOR EACH CONTINGENCY BASED ON DYNAMIC COMMITMENT AND SEASTATE**
 - GOAL IS TO MODEL EACH EXPLICITLY

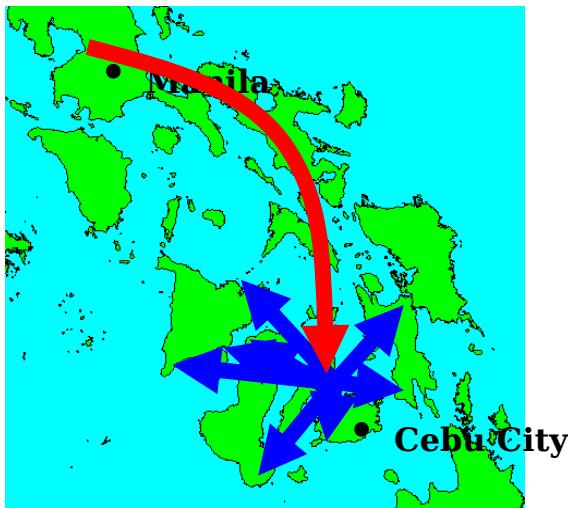
N81 MOOTW ANALYSIS CASE SET

- **PHILIPPINE HUMANITARIAN ASSISTANCE**
- **TOBAGO INTERVENTION**
- **C⁴ISR SCUD HUNT**
- **SWA AMPHIBIOUS RAID**
- **NIGERIA NEO (MCCDC MISSION AREA ANALYSIS CASE)**
- **OPPOSED NEO CASE**
- **MARITIME INTERDICTION**
- **NO-FLY ZONE**

PHILIPPINE HUMANITARIAN ASSISTANCE

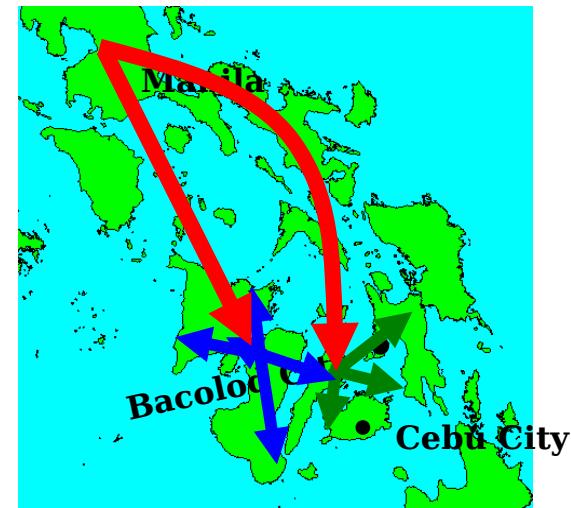
- **DYNAMIC COMMITMENT VIGNETTE**
- **ARG PROVIDES HUMANITARIAN ASSISTANCE AFTER TYPHOON IN PHILIPPINES**
- **PRIMARY MISSION IS DISTRIBUTION OF FOOD TO AFFECTED AREAS**
- **ARG ASSETS ARE USED FOR INTRA-THEATER DISTRIBUTION OF SUPPLIES AIRLIFTED INTO THEATER**
- **PHILIPPINE INDIGENOUS DISTRIBUTION SYSTEMS GRADUALLY RECONSTITUTED DURING OPERATION**

SCENARIO COURSES OF ACTION



COURSE OF ACTION 1

- ALL SUPPLIES COME INTO MANILA
- USAF C-17 AND INTERNATIONAL NGOs TRANSSHIP SUPPLIES TO CEBU CITY
- ARMY CH-47, MARINE V-22, CH-53, AND NAVY LCAC DISTRIBUTE SUPPLIES TO PROVINCES



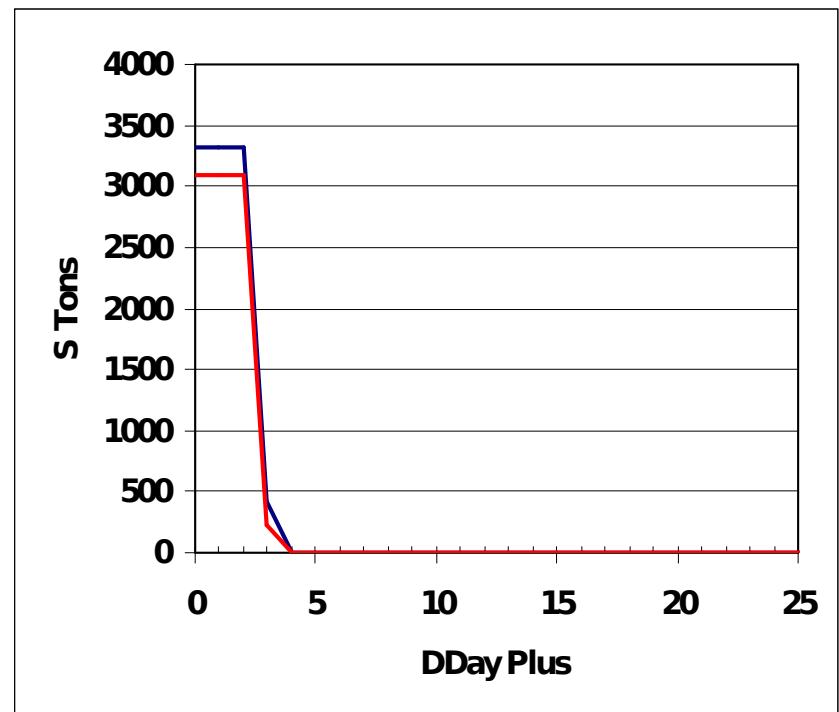
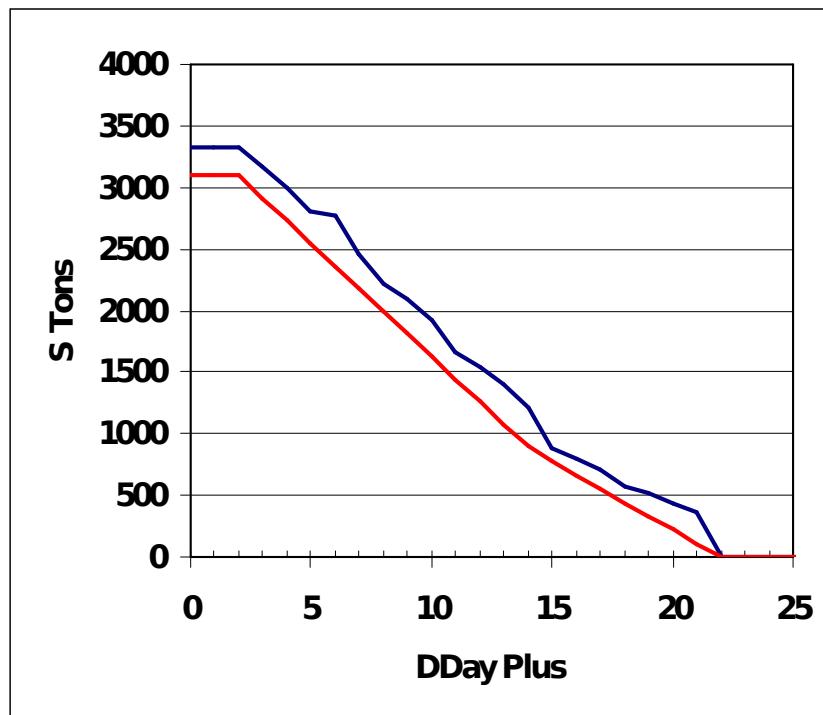
COURSE OF ACTION 2

- ALL SUPPLIES COME INTO MANILA
- USAF C-17 AND INTERNATIONAL NGOs TRANSSHIP SUPPLIES TO CEBU CITY
- ARMY CH-47s DISTRIBUTE SUPPLIES
- CHARTERED COMMERCIAL SHIPS MOVE SUPPLIES TO BACOLOD CITY
- MARINE V-22, CH-53, AND NAVY LCAC DISTRIBUTE SUPPLIES

TOTAL DELIVERIES AND REQUIREMENTS

ALTERNATE COA

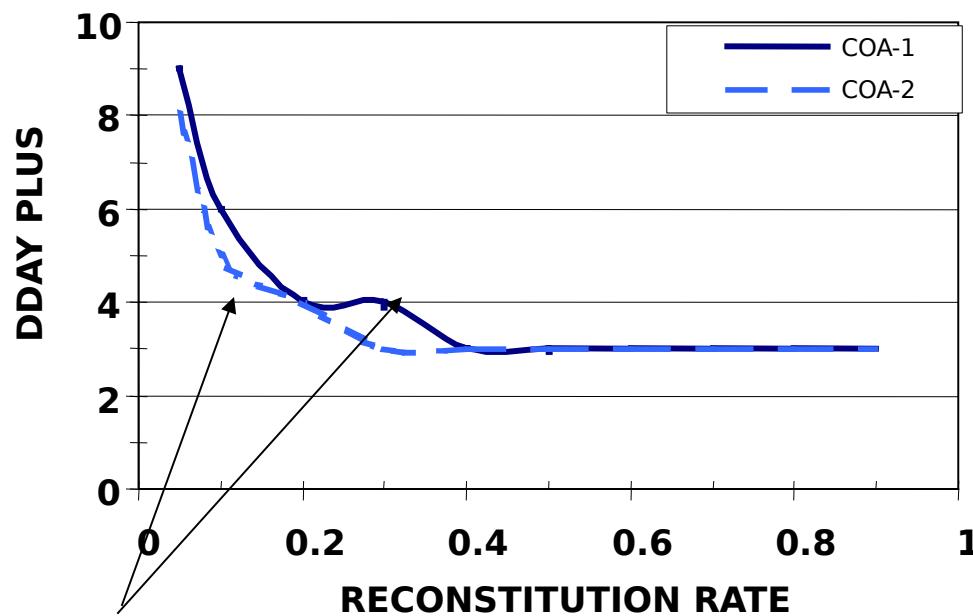
RECONSTITUTION RATE = 0.05 RECONSTITUTION RATE = 0.8



Distribution requirements
 Distribution by US Forces

PHILIPPINE HUMANITARIAN ASSISTANCE

DEPARTURE DATES FOR FIRST ARG



**2ND COURSE OF ACTION
RESULTS IN SHORTER COMMITMENT
TIME WHEN RECONSTITUTION
TAKES LONGER**

TOBAGO INTERVENTION *



- PROTECT AND EVACUATE US CITIZENS/OTHERS
- NEUTRALIZE TROOPS SUPPORTING COUP
- STABILIZE SITUATION
- MAINTAIN THE PEACE

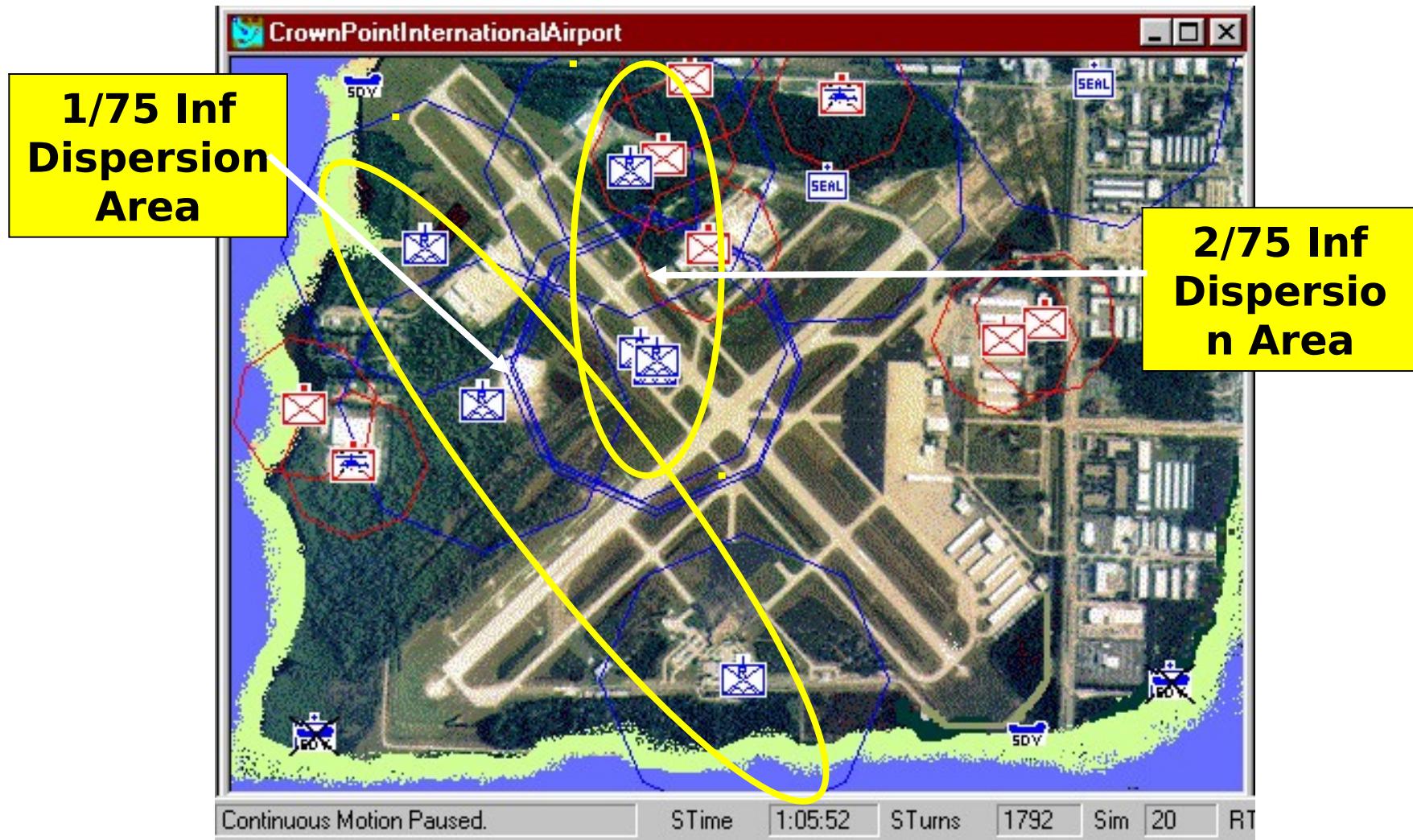
* Scenario is fictitious and used only for development of analysis methodology

- IN CONJUNCTION WITH OECS NATIONS, ASSIST IN RESTORATION OF THE DEMOCRATIC GOVERNMENT

SCREEN CAPTURE

NO BEACON EFFECT

75TH INFANTRY PARACHUTE ASSAULT



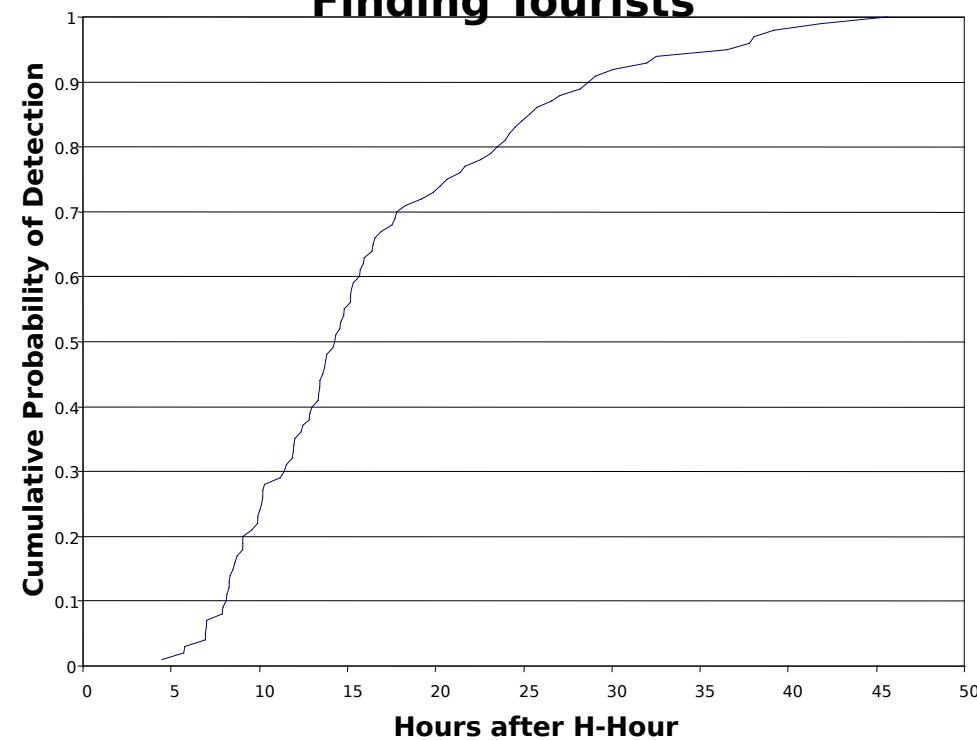
TOBAGO INTERVENTION CASE

SAMPLE RESULTS

TOURIST EVACUATION

Hours After H-Hour Before

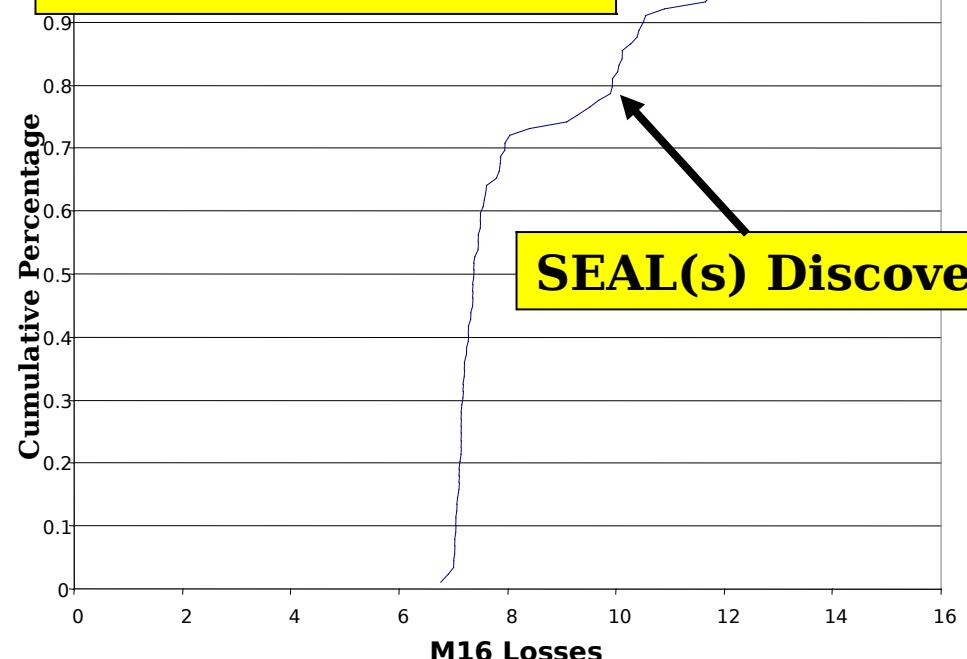
Finding Tourists



BLUE LOSSES

M16 LOSSES

SEAL(s) Discovered, No Beacon

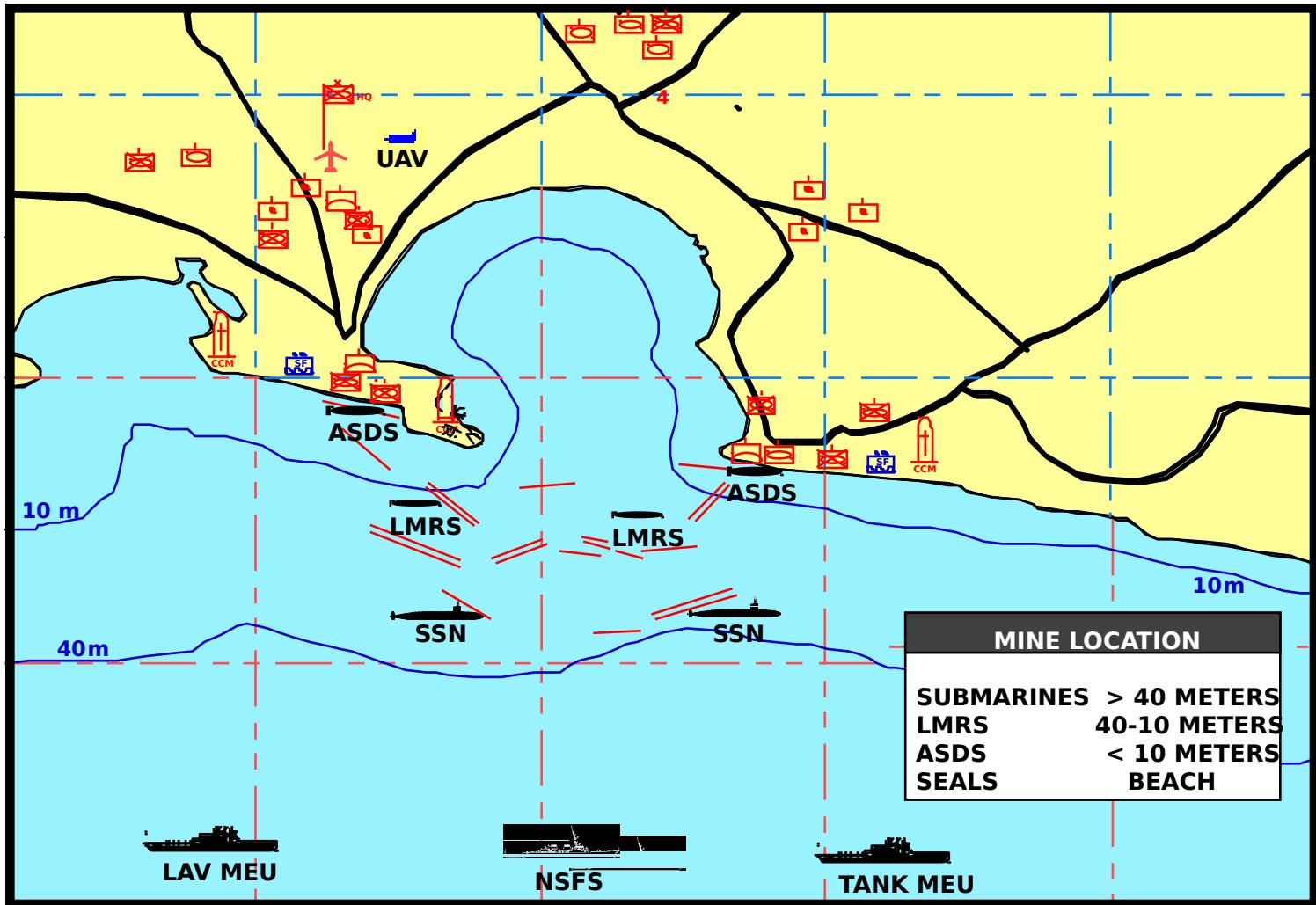


**FORCE LEVELS APPEAR SUFFICIENT FOR TIMELY
EVACUATION OF TOURISTS**

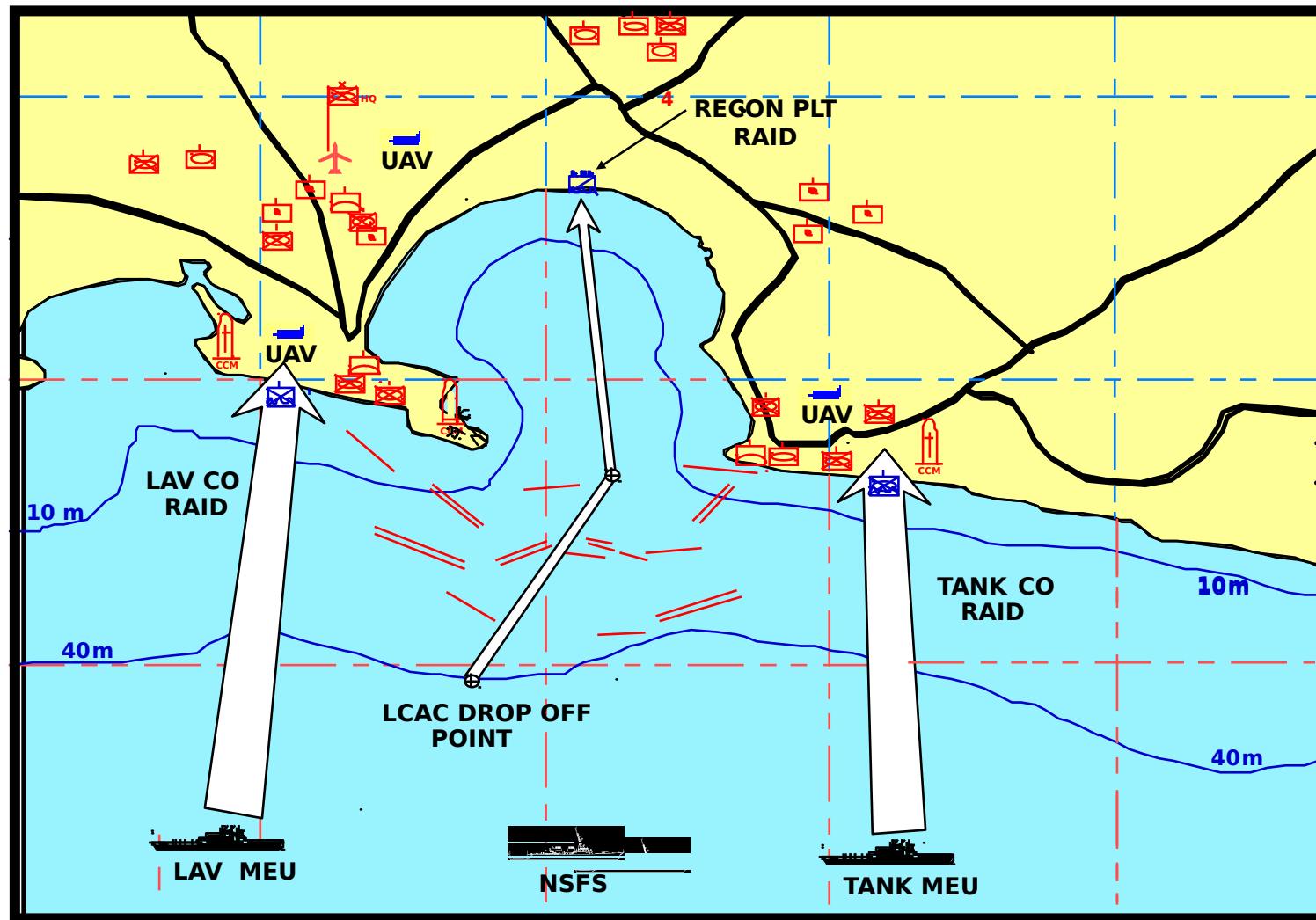
SWA AMPHIBIOUS RAID OVERVIEW

- **ARG/MEU(SOC) OPERATION**
- **SHORT-DURATION LANDING (3 HOURS)**
- **SUPPORTED BY ORGANIC AIR AND NSFS**
- **SEVERAL DAYS OF MINE SURVEY/RECON PRIOR TO LANDING**
- **RAID OBJECTIVES**
 - **PUNITIVE ACTION AGAINST FORCES ASHORE**
 - **DIVERT ENEMY FORCES FROM VICINITY OF SUBSEQUENT LANDING(S)**
- **FIRST PHASE IN LARGER OMFTS OPERATION**

RECONNAISSANCE PHASE



ASSAULT PHASE



AMW INPUTS

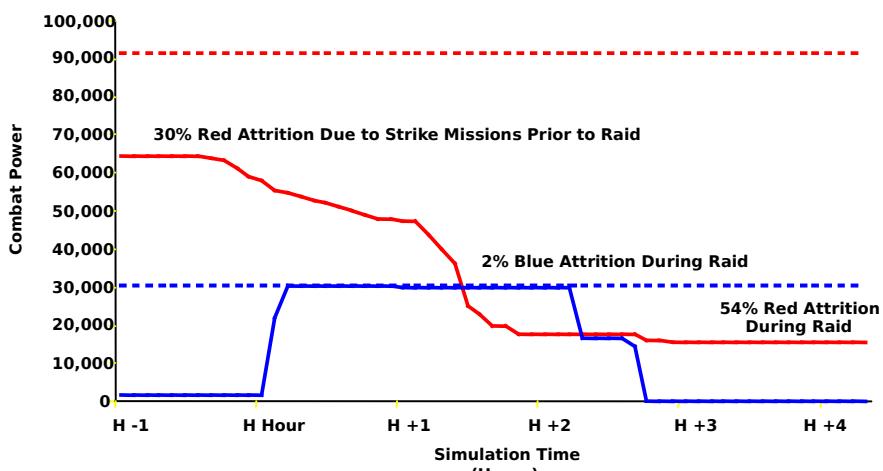
Cases For Blue

	FAVORABLE	UNFAVORABLE
• SEA STATE :	2	2
• PRIORITY STRIKE ATTRITION TO RED :	30%	0%
• BEACH/ASHORE MINES :	OFF/OFF	ON/ON
• BLUE ATTRITION FROM BEACH MINES :	0%	90%
• GROUND FORCES BREAK POINT :	BLUE: 90%, RED: 50%	BLUE: 60%, RED: 50%
• GROUND FORCES EXCHANGE PERCENTAGE :	BLUE: 60%, RED: 40%	BLUE: 60%, RED: 40%
• RED ARTILLERY EFFECTIVENESS :	HE (3 VOLLEYS)	DPICM (3 VOLLEYS)
• RED CM VS. AIR TO GROUND ORDNANCE :	0%	50%
• FRIENDLY FIRE ATTRITION LEVEL (BAT ATTACK)	: 0%	50%
• SEALS RECON BEYOND SURF ZONE :	YES	NO
• SEALS DISCOVERED ON BEACH :	NO	NO
• RED C3 EFFECTIVENESS :	EXCELLENT	POOR
• BLUE RECON PLATOON CONOPS :	MOPMS MINES	ANTI-TANK WEAPONS

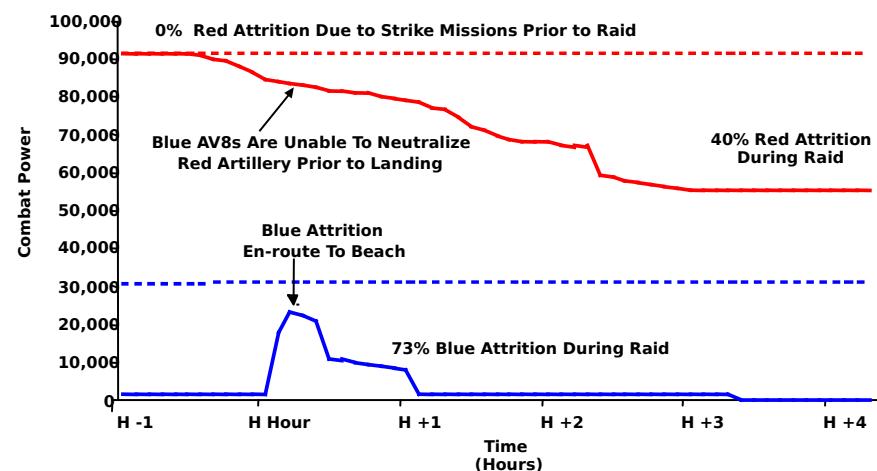
AMW RAID RESULTS

COMBAT POWER ASHORE

FAVORABLE BLUE OUTCOME



UNFAVORABLE BLUE OUTCOME



— Red Forces In Country Combat Power
— Blue Forces In Country Combat Power

— Maximum Red Combat Power
— Maximum Blue Combat Power

FORCE APPEARS SUFFICIENT GIVEN THOROUGH IPB (SEALS), NSFS CAPABILITY AGAINST ARMOR, AND THE ABILITY TO SUPPRESS AND DESTROY ARTILLERY

IRANIAN NO FLY ZONE

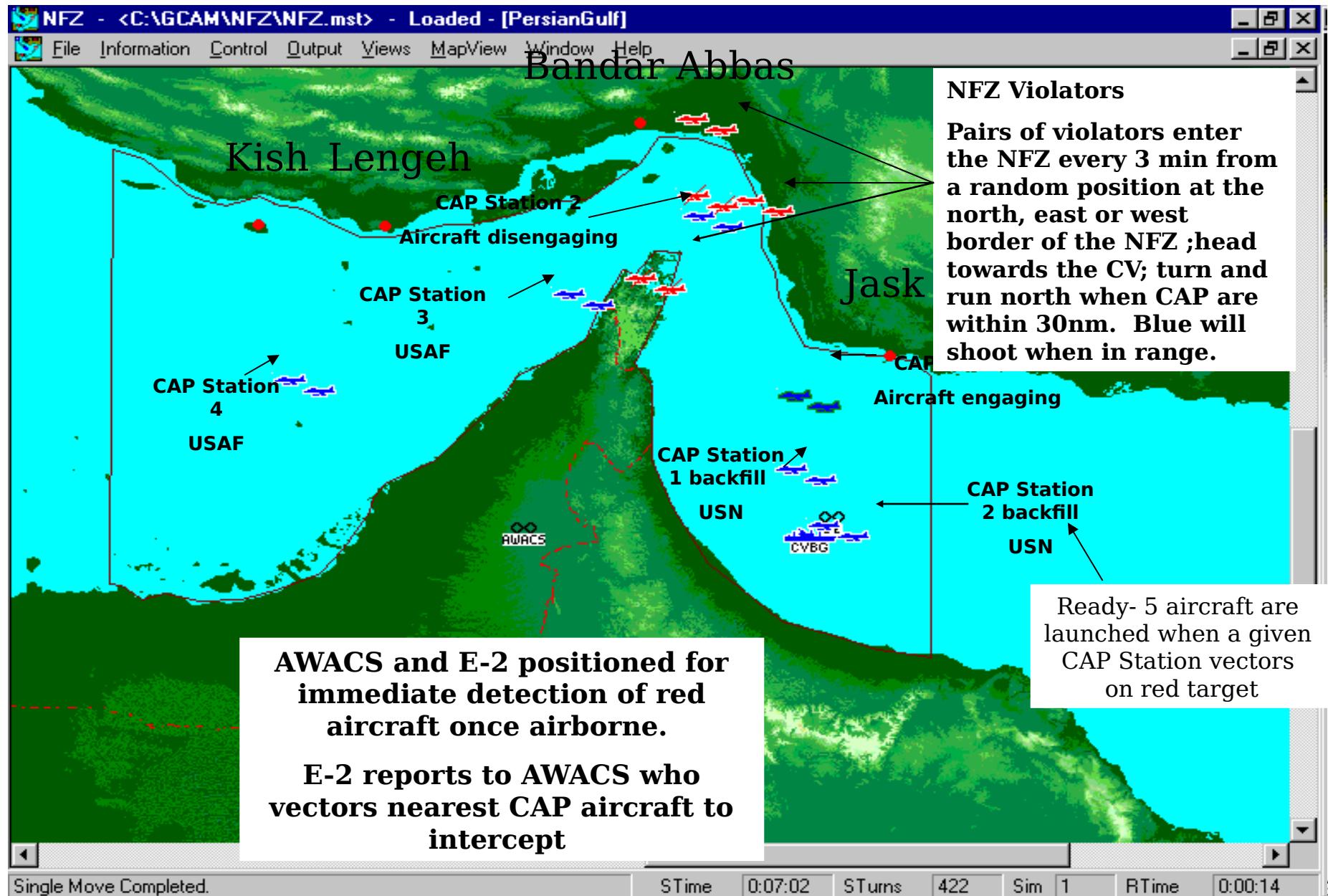
- **OBJECTIVE: TO CREATE A ROBUST, FLEXIBLE ANALYSIS CASE THAT MODELED SURVEILLANCE IN A NON-COMBAT, PEACETIME ENVIRONMENT THAT CAN BE USED IN FORCE STRUCTURE ANALYSIS**
- **PURPOSE: TO DETERMINE THE EFFECTIVENESS OF U.S. FORCES IN DETECTING AND INTERDICTING VIOLATORS OF A NO FLY ZONE IN THE 2008 TIMEFRAME**

IRANIAN NO FLY ZONE (CONT.)

- RESTRICTIONS IN THE NFZ*
 - AIR AND SURFACE ECONOMIC TRANSACTIONS CAN CONTINUE
 - NO MOVEMENT OF MILITARY AIRCRAFT PERMITTED
 - AIRCRAFT POSITIVELY IDENTIFIED AS MILITARY WILL BE FIRED UPON.
 - THESE AIRCRAFT LEAVING THE NFZ MAY STILL BE PROSECUTED
 - UNKNOWN AIRCRAFT WITH NO POSITIVE IFF CODES WILL BE FIRED UPON
 - ONLY REGULARLY SCHEDULED COMMERCIAL AIR TRAFFIC ALLOWED
 - COMMERCIAL AIR IDENTIFICATION WILL BE CONFIRMED BY COMBAT IDENTIFICATION SYSTEMS
 - COMMERCIAL AIR ACTIVITY IN THE NFZ MUST OBSERVE STANDARD ICAO PROCEDURES

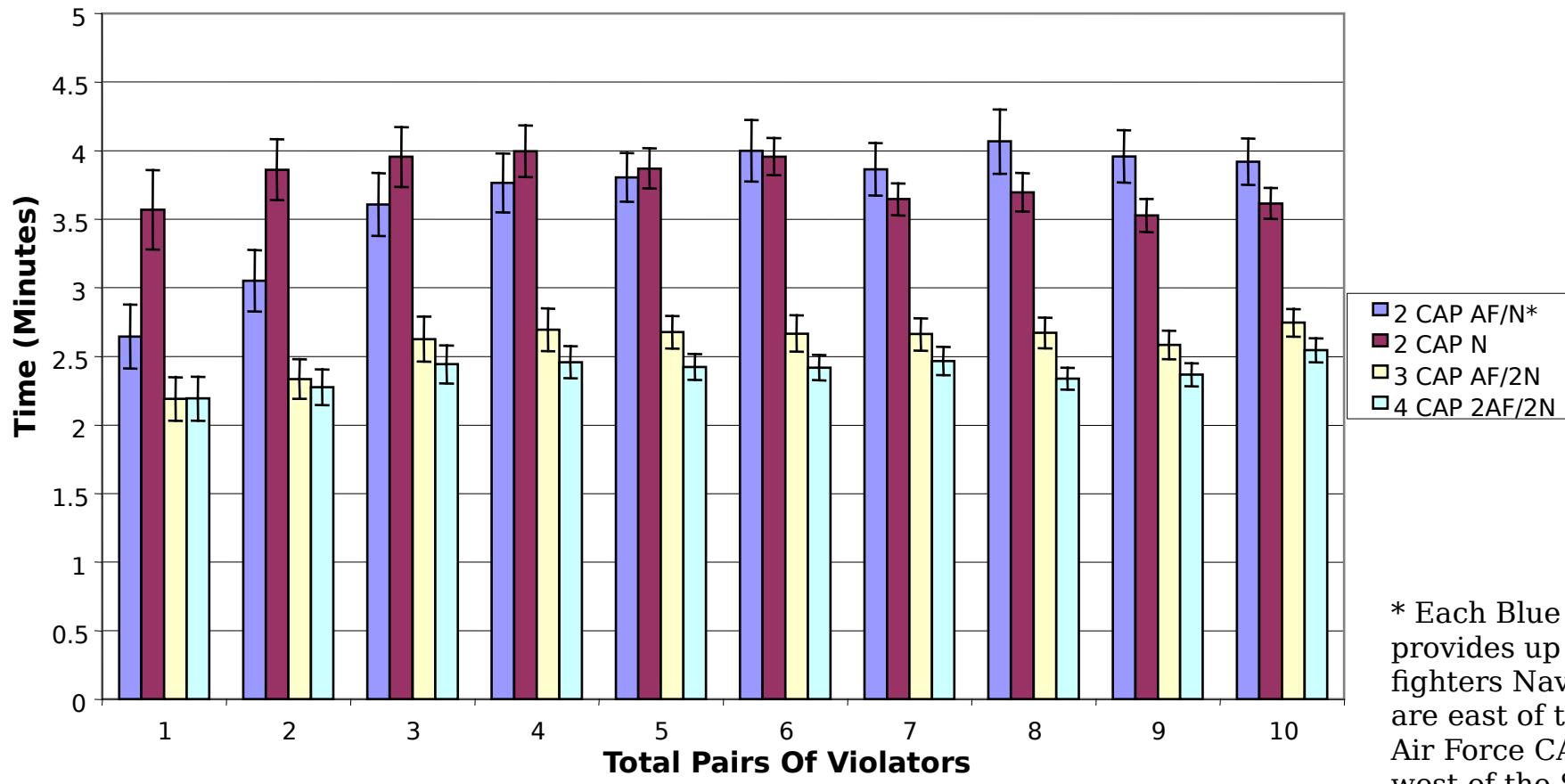
* BASED ON DYNAMIC COMMITMENT NFZ SCENARIO RESTRICTIONS

SCENARIO OVERVIEW



SAMPLE RESULTS

Average Time Spent in the No Fly Zone



* Each Blue CAP Station provides up to two pairs fighters Navy CAP stations are east of the Strait, Air Force CAP stations are west of the Strait

•3 CAP STATIONS (1 AIR FORCE AND 2 NAVY) ARE SUFFICIENT TO ENFORCE THIS NO FLY ZONE UNDER THE CONDITIONS ANALYZED

SWA MARITIME INTERDICTION OPERATIONS

- OBJECTIVE: TO CREATE A ROBUST, FLEXIBLE ANALYSIS CASE THAT MODELED SURVEILLANCE IN A NON-COMBAT, PEACETIME ENVIRONMENT THAT CAN BE USED IN FORCE STRUCTURE ANALYSIS**
- PURPOSE: TO DETERMINE THE EFFECTIVENESS OF U.S. FORCES AND ALLIED NAVAL FORCES IN ENFORCING UNITED NATIONS SANCTIONS AGAINST A COUNTRY IN THE 2008 TIMEFRAME**
- SCENARIO BASED ON DYNAMIC COMMITMENT VIGNETTE IN SWA THEATER**

MISSION DESCRIPTION

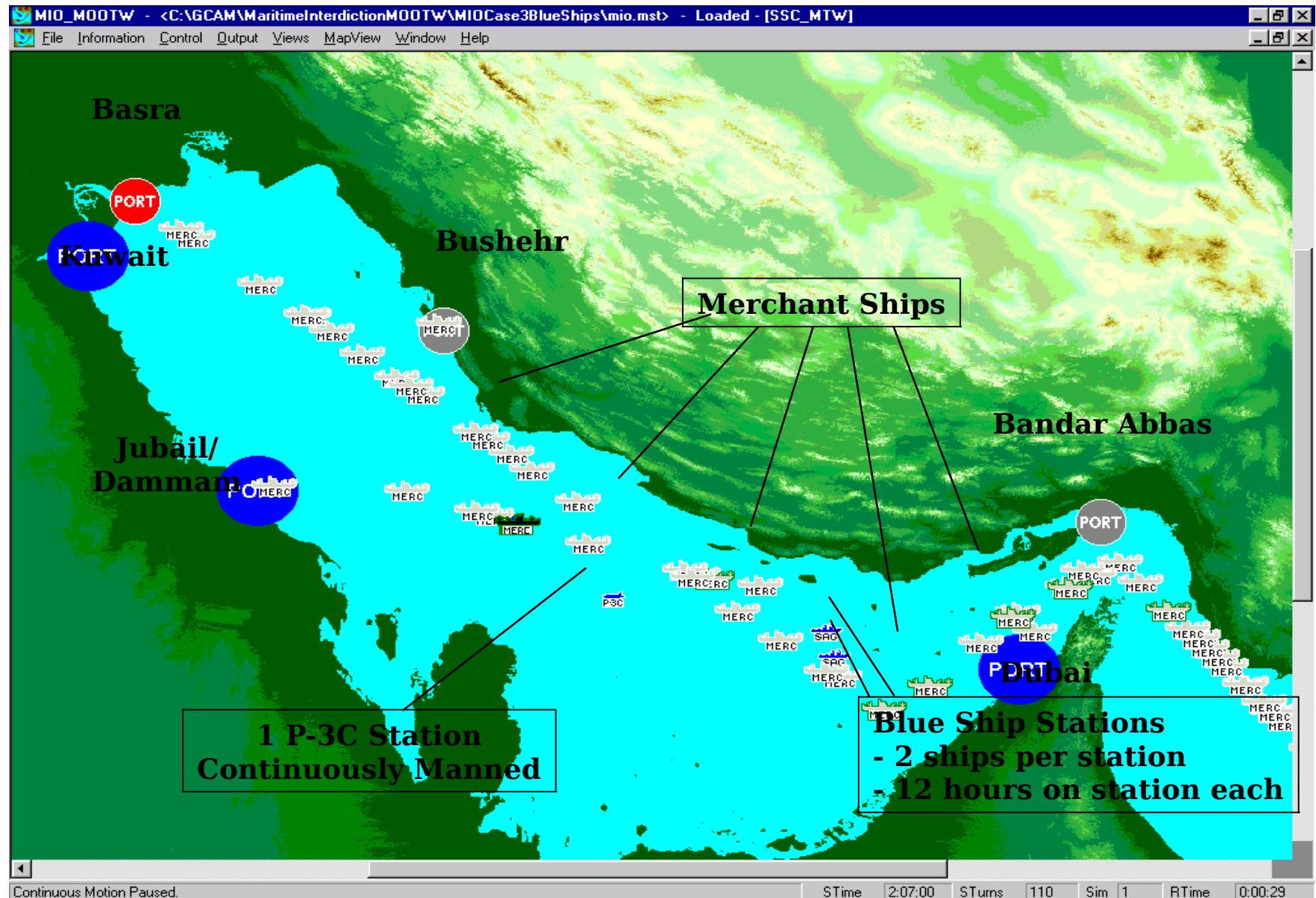
- **U.S. FORCES AND ALLIED NAVAL FORCES ENFORCE UNITED NATIONS SANCTIONS THAT NO CONTRABAND BE DELIVERED TO THE COUNTRY**
 - **WILL HAVE ACCESS TO ALLIED AND COALITION AIRFIELDS AND PORT FACILITIES IN THE REGION**
 - **P-3S**
 - **MONITOR SHIPPING ACTIVITY IN VICINITY OF THE COUNTRY**
 - **DETERMINE WHICH SHIPS ARE SUSPICIOUS**
 - **U.S. AND ALLIED SHIPS**
 - **MAINTAIN SHIP STATIONS**
 - **QUERY VIA BRIDGE-TO-BRIDGE RADIO ANY SHIP NOT PREVIOUSLY QUERIED BY AIRCRAFT**
 - **LEAVE STATION WHEN CUED BY THE P-3 TO CONDUCT VISIT, BOARD, SEARCH AND SEIZURE OF SUSPICIOUS VESSELS, AS REQUIRED, TO ENSURE NO CONTRABAND IS DELIVERED BY SEA TO THE COUNTRY**
 - **ARE PREPARED TO FORCIBLY STOP AND DIVERT ANY VESSELS THAT FAIL TO COMPLY WITH THE U.N. SANCTIONS TO A FRIENDLY PORT**

MISSION DESCRIPTION (CONT.)

- **SHIPPING TRAFFIC BASED ON ONI PROJECTIONS FOR 2008**
- **TIME TO VISIT, BOARD, AND SEARCH AND PERCENT OF SHIPS THAT ARE SUSPICIOUS, CARRYING CONTRABAND, AND RESISTING BOARDING BASED ON DESERT STORM DATA***

*** SOURCE: DESERT STORM RECONSTRUCTION REPORT, VOL. VII
MARITIME INTERCEPTION FORCE OPS**

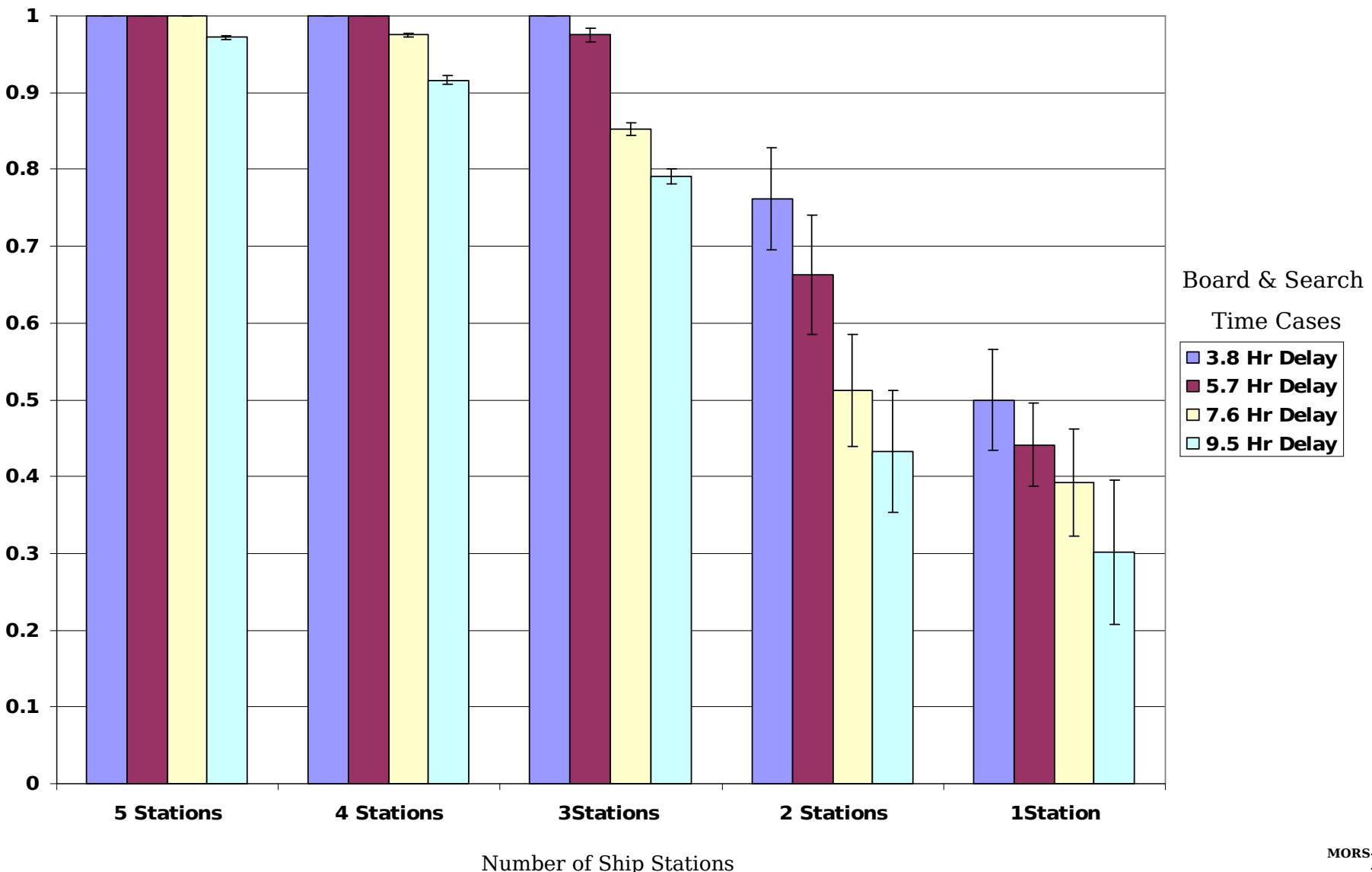
SCENARIO OVERVIEW - 1 P-3 CASE



CONTRABAND DELIVERY RESULTS

- 1 P-3 STATION

Fraction of Contraband To Belligerent Interdicted
(n = 100 Sims)



INSIGHTS

- **ONE P-3 STATION IS SUFFICIENT TO INTERDICT THE CONTRABAND FOR THE SCENARIO AND ASSUMPTIONS ANALYZED**
- **THE TIME TO BOARD AND SEARCH HAS A SIGNIFICANT IMPACT ON THE ABILITY TO INTERDICT SHIPS AND PREVENT CONTRABAND DELIVERY**
- **THREE SHIP STATIONS APPEAR TO BE ADEQUATE IN THIS SCENARIO TO INTERDICT SHIPS. THIS IS MOST LIKELY BECAUSE OF THE ASSUMPTION THAT THE CONTRABAND CARRYING SHIPS OFFLOAD THE CONTRABAND ON TO THREE SMALLER SHIPS AT DUBAI**

SUMMARY

- **DUAL MTW SCENARIOS DO NOT FULLY ADDRESS REQUIREMENTS CHALLENGING FUTURE MILITARY FORCE STRUCTURE**
- **FORCE STRUCTURE ASSESSMENTS MUST INCLUDE FORWARD PRESENCE AND CONTINGENCY RESPONSE**
- **ESSENTIAL ELEMENTS OF FORCE STRUCTURE ANALYSIS**
 - **GLOBAL NAVAL FORCE ALLOCATION**
 - **FORCE SUFFICIENCY**